



#14

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

IN RE APPLICATION OF: :

QUINN ET AL. : GROUP: 3311

SERIAL NO: 08/420,503 :

FILED: APRIL 12, 1995 : EXAMINER: NASSER

FOR: THERMODILUTION CATHETER  
HAVING A SAFE, FLEXIBLE  
HEATING ELEMENT

UPDATED 37 CFR 1.607 REQUEST  
FOR AN INTERFERENCE WITH A PATENT

ASSISTANT COMMISSIONER FOR PATENTS  
WASHINGTON, D.C. 20231

I. 37 CFR 1.607(a)(1)

The patent is No. 5,435,308, issued to Gallup et al. on July 25, 1995, entitled "MULTI-PURPOSE MULTI-PARAMETER CARDIAC CATHETER," and assigned at issue to Abbott Laboratories (hereinafter referred to as "the Gallup et al. patent").

II. 37 CFR 1.607(a)(2)

Claim 1 or 11 or 16 of the Gallup et al. patent

OR

Claim 45 or 46 or 57 or 58 of the Quinn et al. application.

III. 37 CFR 1.607(a)(3)

Claims 1-20 in the Gallup et al. patent all correspond to the proposed count.

IV. 37 CFR 1.607(a)(4)

Claims 45-60 in the Quinn et al. application correspond to the proposed count.

Claims 1, 11, and 16 in the Gallup et al. patent each corresponds identically to a portion of the proposed count. While claims 2-10, 12-15, and 17-20 in the Gallup et al. patent do not correspond identically to any portion of the proposed count, each of those claims depends from a claim which does correspond identically to a portion of the proposed count, and none of those claims adds any limitation which would cause it to define a separate patentable invention within the meaning of 37 CFR 1.601(n).

Claims 45, 46, 57, and 58 in the Quinn et al. application each corresponds identically to a portion of the proposed count. While claims 47-56, 59, and 60 do not correspond identically to any portion of the proposed count, each of those claims depends from a claim which corresponds identically to a portion of the proposed count, and applicants do not currently contend that any of those claims contains an additional limitation which would cause it to define a separate patentable invention within the meaning of 37 CFR 1.601(n).

V. 37 CFR 1.607(a)(5)

Claims 45-60 may be applied to applicants' disclosure as follows:

45. A multi-lumen, multi-purpose cardiac catheter comprising:

a) a multi-lumen main body portion;  
(b) a plurality of extension tubes, each one of said plurality of extension tubes being connected to a respective lumen of said multi-lumen main body portion; and

(c) an interface connecting said multi-lumen main body portion and said plurality of extension tubes,

wherein:

(d) said multi-lumen main body portion comprises:

(i) at least one lumen for holding and supporting fiber optic filaments;

(ii) at least one lumen for receiving thermal element connectors;

(iii) at least one lumen for receiving a device for temperature measurement;

Passim.

The flexible catheter body portion 100.

Page 16 line 35 - page 17 line 4.

The catheter body junction 106.

See the following paragraphs.

Page 24 line 36 - page 25 line 1.

See Figure 1 and page 16 line 35 - page 17 line 4. The heater extension tube is received in one of the lumens.

See Figure 1 and page 16 line 35 - page 17 line 4. The thermistor or thermocouple extension tube is received in one of the lumens.

(iv) at least one lumen associated with a balloon mounted at the distal end of said multi-lumen main body portion for assisting in placement of said multi-lumen main body portion in a patient; and

(v) a port defined by surfaces of one of the lumens of said multi-lumen main body portion, said port for injecting a fluid into a blood stream of a patient; and

(vi) a fiber optic apparatus including said fiber optic filaments, said fiber optic filaments disposed in said at least one lumen for holding and supporting said fiber optic filaments, and said fiber optic filaments extending from inside said multi-lumen main body portion to a fiber optic coupler associated with the catheter;

(e) a temperature measurement apparatus is mounted at the distal end of said multi-lumen main body portion;

(f) wiring extends from the temperature measurement apparatus along said multi-lumen main body portion and to a housing associated with said multi-lumen main body portion;

(g) an external thermal element is mounted on said multi-lumen main body portion near the distal end of said multi-lumen main body portion;

See Figure 1 and page 16 line 35 - page 17 line 4. The balloon inflation extension tube is received in one of the lumens.

Page 16 line 35 to page 17 line 2 and page 24 lines 34-36 disclose a proximal injectate lumen and proximal fluid infusion. Page 18 lines 18-23 disclose the injectate port 402 shown in Figure 4(a).

Page 24 line 36 - page 25 line 1 and page 25 lines 9-16.

The thermistor or thermocouple 104.

See Figure 1 and page 17 line 34 - page 18 line 14.

The heating filament 400.

(h) connectors extend from said external thermal element along said multi-lumen main body portion for connection to a thermal element housing at the proximal end of said multi-lumen main body portion;

(i) said external thermal element and said temperature measurement apparatus are operative with an external apparatus for providing a measurement of continuous cardiac output of a patient; and

(j) said fiber optic apparatus is cooperative with said external apparatus for providing a measurement of mixed venous oxygen saturation of blood of the patient.

46. A multi-lumen, multi-purpose cardiac catheter comprising:

(a) a multi-lumen main body portion;

(b) a plurality of extension tubes, each one of said plurality of extension tubes being connected to a respective lumen of said multi-lumen main body portion; and

(c) an interface connecting said multi-lumen main body portion and said plurality of extension tubes,

wherein:

The heater filament 400 is connected to the heater connector 116.

The cardiac output computer is the external apparatus.

Page 24 line 26 - page 25 line 1.

See claim 45.

(d) said multi-lumen main body portion comprises:

(i) at least one lumen for holding and supporting fiber optic filaments;

(ii) at least one lumen for receiving thermal element connectors;

(iii) at least one lumen for receiving a device for temperature measurement;

(iv) at least one lumen associated with a balloon mounted at the distal end of said multi-lumen main body portion for assisting in placement of said multi-lumen main body portion in a patient;

(v) a fiber optic apparatus including said fiber optic filaments, said fiber optic filaments in said at least one lumen for holding and supporting said fiber optic filaments, and said fiber optic filaments extending from inside said multi-lumen main body portion to a fiber optic coupler associated with the catheter; and

(vi) a necked-down portion near the distal end of

See claim 45.

said multi-lumen main body portion;

(e) a temperature measurement apparatus is mounted at the distal end of said multi-lumen main body portion;

(f) wiring extends from the temperature measurement apparatus along said multi-lumen main body portion to a housing associated with said multi-lumen main body portion;

(g) an external thermal element is mounted on said multi-lumen main body portion near the distal end of said multi-lumen main body portion;

(h) connectors extend from said external thermal element along said multi-lumen main body portion for connection to a thermal element housing at the proximal end of said multi-lumen main body portion;

(i) said external thermal element and said temperature measurement apparatus are operative with an external apparatus for providing a measurement of continuous cardiac output of a patient;

(j) said fiber optic apparatus is cooperative with said external apparatus for

See claim 45.

providing a measurement of mixed venous oxygen saturation of blood of the patient; and

(k) said external thermal element is mounted on said necked-down portion.

47. The multi-lumen, multi-purpose cardiac catheter of claim 46, wherein said necked-down portion is approximately 14-15 centimeters from the distal end of said multi-lumen main body portion.

48. The multi-lumen, multi-purpose cardiac catheter of claim 46 wherein said external thermal element comprises a heater coil wound about said necked-down portion.

49. The multi-lumen, multi-purpose cardiac catheter of claim 48, wherein said temperature measurement apparatus comprises a thermistor which is distal said heater coil.

50. The multi-lumen, multi-purpose cardiac catheter of claim 48, wherein said heater coil comprises windings pitched at a center-to-center spacing sufficient to separate adjacent coils from one another.

See claim 45.

Page 18 lines 22-26 and page 22 lines 3-7.

Page 18 lines 15-29.

Page 16 lines 21-24 and Figure 4(a).

See Figure 4(b) and page 18 lines 18-20.

51. The multi-lumen, multi-purpose cardiac catheter of claim 48, wherein said heater coil is surrounded by a thin outer sheath to prevent said external thermal element from directly contacting the patient's blood.

52. The multi-lumen, multi-purpose cardiac catheter of claim 51, wherein an outer sheath diameter of said thin outer sheath approximates an outer main body portion diameter of said multi-lumen main body portion, thereby facilitating a smooth insertion of said multi-lumen main body portion into the body of the patient.

53. The multi-lumen, multi-purpose cardiac catheter of claim 45, wherein:

(a) said port is distal said interface and

(b) said lumen having the surfaces defining said port is an injectate lumen and said injectate lumen and said port enable injection of an injectate fluid into the blood stream of the patient.

54. The multi-lumen, multi-purpose cardiac catheter of claim 45, wherein said external thermal element comprises a thin film member spirally wound about said multi-lumen main body portion at approximately fourteen

Page 18 lines 26-29.

See Figure 4(b) and page 20 lines 20-31.

See claim 45.

Page 16 line 37 - page 17 line 1, page 18 lines 22-24, and page 24 lines 34-35.

Passim, particularly page 24 lines 34-35.

Page 18 lines 15-29.

centimeters from the distal end of said multi-lumen main body portion.

55. The multi-lumen, multi-purpose cardiac catheter of claim 45, wherein:

(a) said external thermal element comprises a heating filament printed on two opposing sides of a substrate and

(b) said substrate is a thin material that is capable of being incorporated into a filament material that is flexible and has the ability to bond with an adhesive.

56. The multi-lumen, multi-purpose cardiac catheter of claim 45, wherein said external thermal element comprises a layer of material with high thermal conductivity for providing temperature uniformity on a surface of said external thermal element.

57. A multi-lumen, multi-purpose cardiac catheter comprising:

(a) a multi-lumen main body portion;

(b) a plurality of extension tubes, each one of said plurality of extension tubes being connected to a respective lumen of said multi-lumen main body portion; and

See claim 45.

Page 18 lines 30-31.

Page 18 lines 31-34.

Page 18 line 37 - page 19 line 1.

Passim.

The flexible catheter body portion 100.

Page 16 line 35 - page 17 line 4.

(c) an interface connecting said multi-lumen main body portion and said plurality of extension tubes,

wherein:

(d) said multi-lumen main body portion comprises:

(i) at least one lumen for holding and supporting fiber optic filaments;

(ii) at least one lumen for receiving thermal element connectors;

(iii) at least one lumen for receiving a device for temperature measurement;

(iv) at least one lumen associated with a balloon mounted at the distal end of said multi-lumen main body portion for assisting in placement of said multi-lumen main body portion in a patient;

(v) a port defined by surfaces of one of the lumens of said multi-lumen main body portion, said port for injecting a fluid into a blood stream of a patient; and

(vi) a fiber optic apparatus including said fiber optic filaments, said fiber optic filaments disposed in said at least one lumen for holding and supporting said fiber optic filaments, and

The catheter body junction 106.

See the following paragraphs.

Page 24 line 36 - page 25 line 1.

See Figure 1 and page 16 line 35 - page 17 line 4. The heater extension tube is received in one of the lumens.

See Figure 1 and page 16 line 35 - page 17 line 4. The thermistor or thermocouple extension tube is received in one of the lumens.

The balloon inflation extension tube is received in one of the lumens. See Figure 1 and page 16 line 35 - page 17 line 4.

See claim 45.

Page 24 line 36 - page 25 line 1.

said fiber optic filaments extending from inside said multi-lumen main body portion to a fiber optic coupler associated with the catheter;

(e) a temperature measurement apparatus is mounted at the distal end of said multi-lumen main body portion;

(f) wiring extends from the temperature measurement apparatus along said multi-lumen main body portion to a housing associated with said multi-lumen main body portion;

(g) a necked-down portion of said multi-lumen main body portion is near the distal end of said multi-lumen main body portion;

(h) an external thermal element is mounted on said necked-down portion;

(i) connectors extend from said external thermal element along said multi-lumen main body portion for connection to a thermal element housing at the proximal end of said multi-lumen main body portion;

(j) said external thermal element and said temperature measurement apparatus are operative with an external apparatus for providing a measurement of continuous cardiac output of a patient; and

(k) said fiber optic apparatus is cooperative with

The thermistor or thermocouple 104.

See Figure 1 and page 17 line 34 - page 18 line 14.

Page 20 lines 20-31 and page 18 lines 22-26.

See Figure 4(b).

The heating filament 400 is connected to the heater connector 116.

The cardiac output computer is the external apparatus.

Page 24 line 26 - page 25 line 1.

said external apparatus for providing a measurement of mixed venous oxygen saturation of blood of the patient.

58. A multi-lumen, multi-purpose cardiac catheter comprising:

(a) a multi-lumen main body portion;

(b) a plurality of extension tubes, each one of said plurality of extension tubes being connected to a respective lumen of said multi-lumen main body portion; and

(c) an interface connecting said main body portion and said plurality of extension tubes,

wherein:

(d) said multi-lumen main body portion comprises:

(i) at least one lumen for holding and supporting fiber optic filaments;

(ii) at least one lumen for receiving thermal element connectors;

(iii) at least one lumen for receiving a device for temperature measurement;

(iv) at least one lumen associated with a

Passim.

The flexible catheter body portion 100.

Page 16 line 35 - page 17 line 4.

The catheter body junction 106.

See the following paragraphs.

Page 24 line 36 - page 25 line 1.

See Figure 1 and page 16 line 35 - page 17 line 4. The heater extension tube is received in one of the lumens.

See Figure 1 and page 16 line 35 - page 17 line 4. The thermistor or thermocouple extension tube is received in one of the lumens.

See Figure 1 and page 16 line 35 - page 17 line 4. The

balloon mounted at the distal end of said multi-lumen main body portion for assisting in placement of said multi-lumen main body portion in a patient; and

(v) a fiber optic apparatus including said fiber optic filaments, said fiber optic filaments in said at least one lumen for holding and supporting said fiber optic filaments, and said fiber optic filaments extending from inside said multi-lumen main body portion to a fiber optic coupler associated with the catheter;

(e) a temperature measurement apparatus is mounted at the distal end of said multi-lumen main body portion;

(f) wiring extends from said multi-lumen main body portion to a housing associated with said multi-lumen main body portion;

(g) a necked-down portion of said multi-lumen main body portion is near the distal end of said multi-lumen main body portion;

(h) an external thermal element is mounted on said necked-down portion;

(i) connectors extend from said external thermal element along said multi-lumen main body portion for connection to a thermal element housing at the

balloon inflation extension tube is received in one of the lumens.

Page 24 line 36 - page 25 line 1.

The thermistor or thermocouple 104.

See Figure 1 and page 17 line 34 - page 18 line 14.

Page 20 lines 20-31 and page 18 lines 22-26.

See Figure 4(b).

The heating filament 400 is connected to the heater connector 116.

proximal end of said multi-lumen main body portion;

(j) at least one lumen of said multi-lumen main body portion comprises an injectate lumen;

(k) said injectate lumen is dedicated to proximal fluid infusion;

(l) said external thermal element and said temperature measurement apparatus are operative with an external apparatus for providing a measurement of continuous cardiac output of a patient;

(m) said fiber optic apparatus is cooperative with said external apparatus for providing a measurement of mixed venous oxygen saturation of blood of the patient; and

(n) said injectate lumen has surfaces defining a port and said injectate lumen and said port enable injection of an injectate fluid into the blood stream of the patient.

59. The multi-lumen, multi-purpose cardiac catheter of claim 46,

wherein said multi-lumen main body portion further comprises at least one injectate lumen for injecting a fluid into the blood stream of the patient, said injectate lumen having surfaces defining a port.

Page 16 line 37 - page 17 line 1 and page 24 lines 34-35.

Page 24 lines 34-35.

The cardiac output computer is the external apparatus.

Page 24 line 26 - page 25 line 1.

Passim.

See claim 46.

See claim 45.

60. The multi-lumen, multi-purpose cardiac catheter of claim 59,

wherein

(a) said port is distal said interface and

(b) said injectate lumen and said port enable injection of an injectate fluid into the blood stream of the patient.

61. A multi-lumen, multi-purpose cardiac catheter comprising:

a) a multi-lumen main body portion;

(b) a plurality of extension tubes, each one of said plurality of extension tubes being connected to a respective lumen of said multi-lumen main body portion; and

(c) an interface connecting said multi-lumen main body portion and said plurality of extension tubes,

wherein:

(d) said multi-lumen main body portion comprises:

(i) at least one lumen for holding and supporting fiber optic filaments;

(ii) at least one lumen for receiving thermal element connectors and associated with a balloon mounted at the distal end of

See claim 59.

See claim 45.

See claim 45.

Passim.

The flexible catheter body portion 100.

Page 16 line 35 - page 17 line 4.

The catheter body junction 106.

See the following paragraphs.

Page 24 line 36 - page 25 line 1.

See Figure 1 and page 16 line 35 - page 17 line 4. The heater extension tube is received in one of the lumens.

said multi-lumen main body portion;

(iii) at least one lumen for receiving a device for temperature measurement;

(iv) at least one lumen dedicated to measuring distal catheter pressure; and

(v) a fiber optic apparatus including said fiber optic filaments, said fiber optic filaments disposed in said at least one lumen for holding and supporting said fiber optic filaments, and said fiber optic filaments extending from inside said multi-lumen main body portion to a fiber optic coupler associated with the catheter;

(e) a temperature measurement apparatus is mounted at the distal end of said multi-lumen main body portion;

(f) wiring extends from the temperature measurement apparatus along said multi-lumen main body portion and to a housing associated with said multi-lumen main body portion;

(g) an external thermal element is mounted on said multi-lumen main body portion

See Figure 1 and page 16 line 35 - page 17 line 4. The balloon inflation extension tube is received in one of the lumens.

Also see page 24 lines 33-35.

See Figure 1 and page 16 line 35 - page 17 line 4. The thermistor or thermocouple extension tube is received in one of the lumens.

See page 16 lines 35-37 and page 24 line 33.

Page 24 line 36 - page 25 line 1 and page 25 lines 9-16.

The thermistor or thermocouple 104.

See Figure 1 and page 17 line 34 - page 18 line 14.

The heating filament 400.

near the distal end of said multi-lumen main body portion;

(h) connectors extend from said external thermal element along said multi-lumen main body portion for connection to a thermal element housing at the proximal end of said multi-lumen main body portion;

(i) said external thermal element and said temperature measurement apparatus are operative with an external apparatus for providing a measurement of continuous cardiac output of a patient; and

(j) said fiber optic apparatus is cooperative with said external apparatus for providing a measurement of mixed venous oxygen saturation of blood of the patient.

62. The multi-lumen, multi-purpose cardiac catheter of claim 61, wherein said at least one lumen dedicated to measuring distal catheter pressure comprises surfaces defining a port.

63. The multi-lumen, multi-purpose cardiac catheter of claim 62, wherein said port is for measuring distal catheter pressure.

The heater filament 400 is connected to the heater connector 116.

The cardiac output computer is the external apparatus.

Page 24 line 26 - page 25 line 1.

See page 16 lines 35-37 and page 24 line 32.

See page 16 lines 35-37 and page 24 line 32.

37 CFR 1.607(a)(6) is inapplicable, since the Gallup et al. patent issued on July 25, 1995 and this updated request is being filed on May 15, 1996.

VII. 37 CFR 1.608

Applicants' effective filing date is January 29, 1991 and the patentees' filing date is July 16, 1992. Accordingly, applicants are not submitting any 37 CFR 1.608 declaration(s).

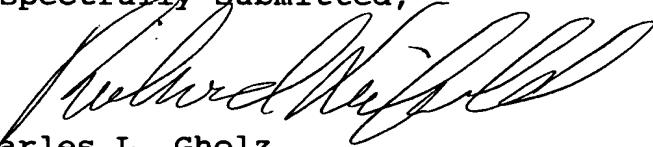


-20-

VIII. PTO Form 850

Submitted herewith for the convenience of the examiner is a proposed PTO Form 850.

Respectfully submitted,

  
Charles L. Gholz  
Registration No. 26,395  
Attorney of Record  
OBLON, SPIVAK, McCLELLAND,  
MAIER & NEUSTADT, P.C.  
Fourth Floor  
1755 Jefferson Davis Highway  
Arlington, Virginia 22202  
(703) 413-3000

Of Counsel:

Richard A. Neifeld, Esq.  
Registration No. 35,299  
OBLON, SPIVAK, McCLELLAND,  
MAIER & NEUSTADT, P.C.  
Fourth Floor  
1755 Jefferson Davis Highway  
Arlington, Virginia 22202  
(703) 413-3000

Bruce M. Canter, Esq.  
Registration No. 34,792  
BAXTER HEALTHCARE CORPORATION  
P.O. Box 15219  
Irvine, CA 92713-5210  
(714) 440-5345

i:\data\ran\baxter\45440011.rq2

## INTERFERENCE-INITIAL MEMORANDUM

**EXAMINERS INSTRUCTIONS** - This form need not be typewritten. Complete the items below and forward to the Group Clerk with all files including those benefit of which has been accorded. The parties need not be listed in any specific order. Use a separate form for each count.

(See MPEP 2309.02)

**BOARD OF PATENT APPEALS AND INTERFERENCES:** An interference is found to exist between the following cases:

This is count 1 of 1 count(s)

1. NAME	SERIAL NO.	FILING DATE	PATENT NO., IF ANY
QUINN ET AL.	08/420,503	April 12, 1995	NONE

The claims of this party which correspond to this count are:  45-63	The claims of this party which <u>do not</u> correspond to this count are:  None
---	--

*Accorded benefit of: COUNTRY		SERIAL NO.	FILING DATE	PATENT NO., IF ANY
UNITED STATES		08/049,231	April 19, 1993	None
UNITED STATES		07/647,578	January 29, 1991	None

2. NAME	SERIAL NO.	FILING DATE	PATENT NO., IF ANY
GALLUP et al.	914,279	July 16, 1992	5,435,308

The claims of this party which correspond to this count are:  1-20	The claims of this party which <u>do not</u> correspond to this count are:  None
--	--

COUNTRY	SERIAL NO.	FILING DATE	PATENT NO., IF ANY
---------	------------	-------------	--------------------

If a claim of any party is exactly the same as this count, it should be circled above. If not, type the count in this space (attach additional sheet if necessary):

Claim 1 or 11 or 16 of the Gallup et al. patent OR claim 45 or 46 or 57 or 58 or 61 of the Quinn et al. application.

Explanation of why each claim designated as corresponding to the count is directed to the same patentable invention as the count:

Claims 1, 11, and 16 of the Gallup et al. patent and claims 45, 46, 57, 58, and 61 of the Quinn et al. application each corresponds identically to a portion of the proposed count. While claims 2-10, 12-15, and 17-20 in the Gallup et al. patent and claims 47-56, 59, 60, 62, and 63 in the Quinn et al. application do not correspond identically to any portion of the proposed count, each of those claims depends from a claim which does correspond identically to a portion of the proposed count, and none of those claims adds any limitations which would cause it to define a separate patentable invention within the meaning of 37 CFR 1.601(n).

\*The serial number and filing date of each application the benefit of which is intended to be accorded must be listed. It is not sufficient to merely list the earliest application necessary for continuity.

DATE	PRIMARY EXAMINER	TELEPHONE NO.	ART UNIT
NOTE: FORWARD ALL FILES INCLUDING THOSE BENEFIT OF WHICH IS BEING ACCORDED.		GROUP DIRECTOR SIGNATURE (if required)	

**PROPOSED COUNT**

**Claim 1 or 11 or 16 of the Gallup et al. patent**

**OR**

**Claim 45 or 46 or 57 or 58 or 61 of the Quinn et al. application.**

ran\baxter\45440011.rq2



IN RE APPLICATION OF: QUINN ET AL.

SERIAL NO.: 08/420,503

FILED: APRIL 12, 1995

FOR: THERMODILUTION CATHETER HAVING A SAFE,  
FLEXIBLE HEATING ELEMENTASSISTANT COMMISSIONER FOR PATENTS  
WASHINGTON, D.C. 20231

RECEIVED

MAY 30 1996

GROUP 3300

Sir:

Transmitted herewith is an amendment in the above-identified application.

No additional fee is required.

Small entity status of this application under 37 C.F.R. §1.9 and §1.27 has been established by a verified statement previously submitted.

Small entity status of this application under 37 C.F.R. §1.9 and §1.27 has been established by a verified statement submitted herewith.

Additional documents filed herewith: Updated 37 CFR 1.607 Request For  
An Interference With A Patent  
Draft PTO-850  
Proposed Count

The Fee has been calculated as shown below.

	CLAIMS REMAINING AFTER		HIGHEST NUMBER PREVIOUSLY PAID FOR	NO. EXTRA CLAIMS	RATE	CALCULATIONS
TOTAL	* 16	MINUS	** 20	= 0	X \$ 22 =	\$ 0
INDEP	* 05	MINUS	*** 03	= 2	X \$ 78 =	\$ 156.00
MULTIPLE DEPENDENT CLAIMS						+ \$250 = \$
TOTAL OF ABOVE CALCULATIONS =						\$
Reduction by 50% for filing by Small Entity						\$
Recordation of Assignment						+ \$ 40 = \$
						TOTAL \$ 156.00

XX A check in the amount of \$ 78.00 is attached.

XX Please charge any additional Fees for the papers being filed herewith and for which no check is enclosed herewith, or credit any overpayment to deposit Account No. 15-0030. A duplicate copy of this sheet is enclosed.

XX If these papers are not considered timely filed by the Patent and Trademark Office, then a petition is hereby made under 37 C.F.R. §1.136, and any additional fees required under 37 C.F.R. §1.136 for any necessary extension of time may be charged to Deposit Account No. 15-0030. A duplicate copy of this sheet is enclosed.

OBLON, SPIVAK, McCLELLAND,  
MAIER & NEUSTADT, P.C.Charles L. Gholz  
Attorney of Record  
Registration No. 26,395  
Richard A. Neifeld  
Registration No. 35,299Fourth Floor  
1755 Jefferson Davis Highway  
Arlington, Virginia  
(703) 413-3000

/lij



IN RE APPLICATION OF: QUINN ET AL.

SERIAL NO.: 08/420,503

FILED: APRIL 12, 1995

FOR: THERMODILUTION CATHETER HAVING A SAFE,  
FLEXIBLE HEATING ELEMENTASSISTANT COMMISSIONER FOR PATENTS  
WASHINGTON, D.C. 20231

Sir:

Transmitted herewith is an amendment in the above-identified application.

No additional fee is required.

Small entity status of this application under 37 C.F.R. §1.9 and §1.27 has been established by a verified statement previously submitted.

Small entity status of this application under 37 C.F.R. §1.9 and §1.27 has been established by a verified statement submitted herewith.

Additional documents filed herewith: Updated 37 CFR 1.607 Request For  
An Interference With A Patent  
Draft PTO-850  
Proposed Count

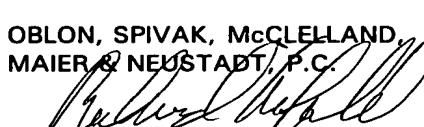
The Fee has been calculated as shown below.

	CLAIMS REMAINING AFTER		HIGHEST NUMBER PREVIOUSLY PAID FOR	NO. EXTRA CLAIMS	RATE	CALCULATIONS
TOTAL	* 16	MINUS	** 20	= 0	X \$ 22 =	\$ 0
INDEP	* 05	MINUS	*** 03	= 2	X \$ 78 =	\$ 156.00
	MULTIPLE DEPENDENT CLAIMS				+ \$250 =	\$
	TOTAL OF ABOVE CALCULATIONS =					\$
	Reduction by 50% for filing by Small Entity					\$
	Recordation of Assignment				+ \$ 40 =	\$
					TOTAL	\$ 156.00

XX A check in the amount of \$ 78.00 is attached.

XX Please charge any additional Fees for the papers being filed herewith and for which no check is enclosed herewith, or credit any overpayment to deposit Account No. 15-0030. A duplicate copy of this sheet is enclosed.

XX If these papers are not considered timely filed by the Patent and Trademark Office, then a petition is hereby made under 37 C.F.R. §1.136, and any additional fees required under 37 C.F.R. §1.136 for any necessary extension of time may be charged to Deposit Account No. 15-0030. A duplicate copy of this sheet is enclosed.

OBLON, SPIVAK, McCLELLAND,  
MAIER & NEUSTADT, P.C.  
Charles L. Gholz  
Attorney of Record  
Registration No. 26,395  
Richard A. Neifeld  
Registration No. 35,299

Fourth Floor  
1755 Jefferson Davis Highway  
Arlington, Virginia  
(703) 413-3000  
/llj